

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No. 09/961,283

The Examiner acknowledges that Goto does not use the rotational number of the motor for the control, but none-the-less, alleges that “the elevator rotational number is basically the same as that of the rotational number of the motor”, and rejects claims 1-6 and 9-10 based on this allegation.

Applicant respectfully disagrees with the Examiner’s analysis. In fact, nowhere does Goto’s actual disclosure teach or suggest that “elevator rotational number” somehow correspond to a motor rotational number, let alone teach or suggest using such a number for performing a correcting process, as claimed in Applicant’s independent claims 1, 2 and 9.

In particular, Goto discloses a vibration control system for an elevator, wherein an elevator speed control circuit has a proportional and integral speed amplifier 3 responsive to the deviation between a speed command ω^* and the actual speed ω_M . Goto provides a car motion feedback circuit which amplifies the difference between a speed command ω^* and the actual elevator car speed ω_{car} with amplifier 12, extracts car vibration characteristics through band-pass filter 14, and changes these vibration components to the optimal phase in a phase correction filter 16 for feedback. Goto further describes detecting means (pulse pickup PP1 and PP2), control means (controller 101), a filter means (bandpass filter 14) and a correcting means (phase compensation filter 16).

Nowhere does Goto disclose, teach or suggest control means for performing a correcting process for the vibration signal based on the motor rotational number as claimed in Applicant’s independent claims 1, 2 and 9. That is, as described in Applicant’s specification (see, for example, pages 13-15, and Fig. 4), since the control means watches the motor rotational number

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Nm of the electric motor, the torque tracking performance is improved in the electric vehicle.

The torque control signal (e.g., target torque) is also corrected by the corrected amount obtained from the correcting means.

Accordingly, the Examiner is impermissibly relying of Applicant's own disclosure as the only source of teaching of the use of the motor rotational number, as claims in independent claims 1, 2 and 9.

Therefore, Applicant's independent claims 1, 2 and 9, as well as the dependent claims 3-6 and 10 (which incorporate all the novel and unobvious features of their respective claims), would not have been obvious from Goto, at least for these reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A vibration reduction control apparatus for an electric motor comprising:

a detecting means for detecting a motor rotational number of the electric motor and outputting a motor rotational number signal based on the motor rotational number;

a filter means for extracting a vibration signal of a predetermined frequency band from the motor rotational number signal; and

a feedback control means for performing a correcting process for the vibration signal based on the motor rotational number.

2. (Amended) A vibration reduction control apparatus for an electric motor comprising:

a detecting means for detecting a motor rotational number of the electric motor and outputting a motor rotational number signal based on the motor rotational number;

a control means for outputting a torque control signal based on the motor rotational number signal and controlling the electric motor;

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a filter means for extracting a vibration signal of a predetermined frequency band including a frequency band of a disturbance vibration based on the motor rotational number signal detected by the detecting means;

a correcting means for performing a predetermined correcting process which reduces a vibration of the vibration signal for the vibration signal of the predetermined frequency band extracted by the filter means and obtaining a corrected amount; wherein

the control means performs an addition or a subtraction of the corrected amount obtained from the correcting means based on a feedback of the motor rotational number for the torque control signal of the electric motor.

9. (Amended) A vibration reduction control apparatus for an electric motor comprising:

a detecting means for detecting a motor rotational number of the electric motor;

a control means for outputting a torque control signal based on the motor rotational number for the electric motor; and

a controller for suppressing effect by characteristic fluctuation of a control system based on the motor rotational number, and obtaining a corrected amount compensating sensibility characteristic when the characteristic fluctuation happens; wherein

the controller performs an addition or a subtraction of the corrected amount obtained from the controller based on a feedback of the motor rotational number for the torque control signal of the electric motor.